544

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1344

PCT09

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/674,330A

DATE: 06/22/2001 TIME: 12:11:11

Input Set : A:\ES.txt

Output Set: N:\CRF3\06222001\1674330A.raw

3 :110 - APPLICANT: Ono Pharmaceutical Co., Ltd.

5 -: 120 - TITLE OF INVENTION: A NOVEL POLYPEPTIDE, A CDNA ENCODING THE POLYPEPTIDE AND UTILIZATION

THEREOF

8 +:130 + FILE REFERENCE: Q61536

10 - 140 - CURFENT APPLICATION NUMBER: 09/674,330A

11 <141 · CURFENT FILING DATE: 2000-10-30

13 <150 - PRIOR APPLICATION NUMBER: JP 10-119731

14 <151 - PRIOR FILING DATE: 1998-04-28

16 -: 150 - PRIOR APPLICATION NUMBER: PCT/JP99/02283

17 -:151 - PRIOR FILING DATE: 1999-04-28

19 <160 × NUMBER OF SEQ ID NOS: 12

21 -1170 - SOFIWARE: PatentIn version 3.0

23 <210 > SEQ ID NO: 1

24 - 211 > LENGTH: 1344

25 H212 - TYPE: DNA

26 4213 - ORGANISM: Mus musculus

28 -(400) > SEQUENCE: 1

19 algecaggat taaaaaggat acteactgtt accatettgg cactetgget tecacatect ti () gagautgoae ageageagtg cacaaaegge tittgacetgg acegecagte aggacagtgt 120 33 ctaqutatty atgaatyoog gaccateeet gaggettyte ytygggaeat gatytytyte 180

35 aaccagaaty gegggtattt gtgeateeet egaaccaacc cagtgtateg agggeettac 240 300 3º transledet actotarate etactragge contactoray rayoggeres accaptarea

360 39 gottocaact accocacgat ticaaggoot officiency gettiggita toagatggat 41 yaayycaacc agtgtgtgga tgtggacgag tgtgcaacag actcacacca gtgcaaccct 420

43 accompatet giatemacae igaaggaggi tacmeetget eetgemeega igggimeigg. 480 540 45 offictiggaag ggeagtgoot agatattgat gaatgteget atggftaetg ceageagete

47 tytycaaaty ticcayyato ctaticotyt acatycaaco ctyytiicac cotcaacyac 600

49 gatqqaaqqt ottqocaaga tgtgaacqag tgogaaactg agaatooctg tgttcagacc 660

72051 tytyteaaca eetatgyete titeatetge egetytyaee eaggatatya aetityayyaa 780 53 gatggeatte actgeagtga tatggaegag tgeagettet eegagtteet etgteaacae

840 55 wagtqtgtga accageeggg eteataette tgetegtgee etecaggeta egteetgttg

57 gatgataaco gaagotgoca ggatatoaat gaatgtgago acogaaacoa caogtgtaco 9(10

59 toactgoaga ettgetacaa tetacaaggg ggetteaaat gtattgatee catcagetgt. 960 ol yagyageett atetgetgat tggtgaaaac egetgtatgt gteetgetga geacaceage 1020

63 tycayagace agecatteae cateetqtat egggacatgg atgtggtgte aggacgetee 1080

hS qt.toctqotq acatottoca qatqcaaqca acaacccqat accctqqtqc ctattacatt 1140 67 thodagatda aatotgqoaa ogaqqqtoga gagttotata tgoqqoaaac aqggootato. 1200

69 authocaece tygtgatgae aegecocate aaagggeete gggacateca getygaetty. 1260

71 qagatqatca etqteaacae tqteateaae tteagaggea qeteegtgat eegaetgegg 1320 73 atalatgtgt egeagtatee gtte

76 + 210 > SEO ID NO: 2

77 +211> LENGTH: 2233

78 -: 212: TYPE DNA

79 - 213 - ORGANISM. Mus musculus

81 <220> FEATURE:

82 <221> NAME/KEY misc_feature

83 <223> OTHER INFORMATION: Clone mouse A55 derived from Day 13 mouse embryonic heart

RAW SEQUENCE LISTING

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Input Set : A:\ES.txt

Output Set: N:\CRF3\06222001\I674330A.raw

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87 -(221) NAME/KEY: misc_feature 08 -(223) OTHER INFORMATION: "n" may be elther a, c, q or t														
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95 -(220)- FEATURE:														
96 -CDDD NAME/KEY: sig_peptide														
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101 <222 > LOCATION: (144)()														
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106 egegeatett ggat atg eea gga tta aaa agg ata ete act gtt ace ate	110													
107 Met Pro Gly Leu Lys Arg Ile Leu Thr Val Thr Ile 108 -20 -15														
110 ttg qca etc tgg ett eea eat eet ggg aat gea eag eag eag tge aea	158													
lll Leu Ala Leu Trp Leu Pro His Pro Gly Asn Ala Gln Gln Gln Cys Thr														
112 -10 -5 -1 1 5														
114 aac gge ttt gae etg gae ege eag tea gga eag tgt eta gat att gat	206													
115 Asn Gly Phe Asp Leu Asp Arg Gln Ser Gly Gln Cys Leu Asp Ile Asp 116 10 20														
- 116	254													
119 Glu Cys Arg Thr Ile Pro Glu Ala Cys Arg Gly Asp Met Met Cys Val	2.74													
120 25 30 35														
122 aac dag aat gge ggg tat tig ige ale eet ega aee aac eea gig tat	302													
12 + Asn Gln Asn Gly Gly Tyr Leu Cys Ile Pro Arg Thr Asn Pro Val Tyr														
124 40 45 50														
126 cga ggg cet tac tea aat eec tac tet aca tee tac tea gge eea tac	350													
127 Arg Gly Pro Tyr Ser Asn Pro Tyr Ser Thr Ser Tyr Ser Gly Pro Tyr														
128 55 60 65														
130 cca gca gcg gcc cca cca gta cca gct tcc aac tac ccc acg att tca	398													
131 Pro Ala Ala Ala Pro Pro Val Pro Ala Ser Asn Tyr Pro Thr Ile Ser														
132 70 75 80 85	1.17													
134 agg cot oft gto tgo ogo tit ggg tat dag atg gat gaa ggd aad dag 135 Arg Pro Leu Val Cys Arg Phe Gly Tyr Gln Met Asp Glu Gly Ash Gln	446													
136 90 95 100														
138 tgt gtg gat gtg gae gag tgt gea aca gae tea eac eag tge aac eet	494													
139 Cys Val Asp Val Asp Glu Cys Ala Thr Asp Ser His Gln Cys Asn Pro	• • •													
140 105 110 115														
142 ace eag ato tgt ato aac act gaa gga ggt tac acc tgc tcc tgc acc	542													
143 Thr Gln Ile Cys Ile Asn Thr Glu Gly Gly Tyr Thr Cys Ser Cys Thr														
144 120 125 130														
146 gat ggg tac tgg cit cig gaa ggg cag igc cia gat att gat gaa igt	590													
147 Asp Gly Tyr Trp Leu Leu Glu Gly Gln Cys Leu Asp Ile Asp Glu Cys														
148 135 140 145	636													
150 ege tat ggt tac tge eag eag etc tgt gea aat gtt eea gga tee tat	638													
151 Arg Tyr Gly Tyr Cys Gln Gln Leu Cys Ala Asn Val Pro Gly Ser Tyr														

RAW SEQUENCE LISTING

DATE: 06/22/2001 PATENT APPLICATION: US/09/674,330A TIME: 12:11:11

Input Set : A:\ES.txt

Output Set: N:\CRF3\06222001\I674330A.raw

15)	150					155					160					165	
	150					155		A. A		A:	160					165	£0.4
												gac					586
	25 L	CYS	1111	CYS		PLO	917	PILE	1111		ASII	Asp	ASP	этγ		Set	
156					170					175					180		7 2 4
												CCC					734
	Cys	(11L	Asp		ASII	الملدا	Cys	GIU		51 U	ASII	Pro	υys		O L II	Inr	
160		_4		135				s. s	190	.		4		195		4	782
	-											tgt					782
	Cys	vaı		inr	гуr	GΙĄ	Ser		116	Uys	Arg	Cys		PLO	917	туг	
164		~ 4. 4.	200				~ + +	205	+	3 cm+	~	.a. 4a-	210	*	+~-		02.5
	-				-							atg					830
	GIU	215	GIU	GIU	Asp	GTA		HIS	UYS	ser	Asp	Met 225	ASP	ıπτα	Cys	261	
168	++-		~~~	++-	-t -	++	220	Pag. 175 . 178	~ ~ ~	+~+	~+ +					+	070
						-				-	-	aac		_			878
	230	Ser	GIU	Phe	reit	235	13 LII	нтз	19.1.11	Cys	240	Asn	73 1 11	PIO	OT.	245	
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175 176	171	Phe	'_ys	261	250	PIO	PIO	'з Т ў	тут	255	rea	Leu	ASP	изр	260	Alg	
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180	261	Cys	(3 ± 11	265	TTG	ASII	'i Lu	CYS	270	птэ	ATH	Asn	nis	275	C/5	1 111	
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184	261	Leu	280	1111	- y >	тут	иси	285	(3 T II	СТУ	13 £ ¥	Phe	29i)	CYS	1 143	ASP	
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												Gly					1070
188	PIO	295	ser	C 1 S	זידני	'.5 L U	300	INT	Leu	Leu	110	305	GIH	ASII	ALG	Cys	
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192		CIS	LLU	AIG	31.4	315	1111	JUL	Cys	nrg	320	יוו.ו כי	1117	1 11.	1 111.	325	
		tat	can	gac	ator	_	ata	ata	tica	aga		tac	att	cet	aet		1166
												Ser					11.00
196	110.01	1 7 1	Mr.A	пър	330	изъ	val	v u i	J. 1	335	211.4	Jer	V CI.L	11.5	340	11126	
	atic	ttc	cad	ata		aca	аса	acc	саа		cct	ggt	acc	tat		att	1214
			-									Gl;	-				1214
200	± 4.5.	1110	3111	345	.5 111	niu	1111	1111	350	111	A .A. * .*	.J.L.I	711(4	355	1 / 1	11.0	
	tte	сал	atic		10+	aac	aac	пап		сда	ааа	ttc	tat		Caa	саа	1262
								-	-			Phe		_			1202
204		3111	360	L 1 U	02			365	O L 1	9	.5 1.1		370		,	0 1	
	aca	aaa		atc	aat	acc	acc		ata	ato	aca	cgc		atc	aaa	aaa	1310
												Arg					± 2 ±
208		375		~	~ ~ *		380					385			-;.,	I	
	aat		gaic	atic	cad	at.a		t.ta	gag	ata	ate	act.	qtc	aac	act	gt.c	1358
												Thr					
212		3	I-			395	- 1-				400					405	
		aac	ttc	aga	aac		t.cc	ata	at.c	caa		cgg	at.a	tat	qt.a		1406
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216				,	410					415		,		•	420		

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Input Set : A:\ES.txt

Output Set: N:\CRF3\06222001\I674330A.raw

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	219	Gln	Tyr	Pro	Phe														
	120				425														
	222	cacc	egage	ıya (cgqg	aggaç	ja a	agga:	aacca	a go	aaga	atga	gag.	egaga	aca (gadat	itgcac	1518	
	221	ctti	tacto	gat (gaata	atcto	c t	प्रमुख्यु-	gdate	c ago	ccta	gcat	ctt	gacco	cat (atoto	gtacta	1578	
	226	ttg	cagai	tgg :	tidadi	totga	ia g	јаса:	adati	g dd	ctca	gttc	ctat	tgato	gea (gttat	lccaaa	1638	
	223	agto	gtta	atc :	ttago	addat	g a	tatg.	agati	t go	cagte	gaet	ctt	caaaq	100	ttoda	atthat	1698	
	230	ttcc	cate	gtt	ttata	ааааа	ia g	аава	tagat	t ta	gatt	tgot	gggi	gtate	jag	teete	cgaagg	1758	
	232	ttca	aaaaq	gac :	tgay:	tggat	it, go	atat	cacct	i ct	taata	etec	Ltc	otoda	atc :	tette	getgea	1818	
	234	ttg	etget	ttt (gcaaa	aagto	cc to	catg	ggata	c gto	ggga	aatg	ctg	ggaat	ag (ctagt	ttgct	1878	
	236	tcti	tgcat	igt :	tatiga	agaag	g c	tatgi	ggaac	c acc	acca	cago	agga	atoga	aag o	gtttt	tatag	1938	
	238	agto	ctati	itt a	aaaa	teaca	it c	tggt.	atttt	ca ca	gcata	aaaa	gaaa	atttt	lag :	ttgto	ctttaa	1998	
	240	aati	ttgta	atg a	agtig	tttaa	ic c	tttt	ettat	t to	attt:	tgag	geti	idtta	aaa (gtggt	tagaat	2058	
	242	tect	ttdda	ааа (ggaat	tcaga	it a	catg	ttatq	g tto	cagto	cttt	ccaa	accto	cat o	acttt	catiga	2118	
W>	244	atci	ttago	ccc a	agtti	tttac	g aa	agaco	ccctt	aa t	tcate	gctt	tnti	taaga	igt i	tttta	acccaa	2178	
		-			-	agagg	jt af	toda	gacto	gati	taaa	taat	tyaa	agaaa	aaa a	aaaaa	ì	2233	
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	250																		
	25 L	SI K212% TYPE: PRT																	
		252 <213: ORGANISM: Mus musculus 254 <220: FEATURE:																	
		55 <2215 NAME/KEY: misc_feature																	
							ION	: C10	one n	nouse	e Abi	o de:	rived	i ire	om Da	ay Li	mouse	embryonic	neart
					NCE:		_	- 1		·*-1		ere l	T 1		. 1		an.		
		M⊖Ľ	Pro	üΙΥ		Lys	Arg	TTe	reu		vaı	Inr	rre	Leu		ьец	LLD		
	261	1 200	Dana	uda	-20	Gly	7 0 0	A 1 ->	(7.1 m)	-15	aln	Ova	The	3.00	-10	Dho	A or.		
	265	neu	PIO	-5	PIO	GLY	ASII	-l	וודבי	וודני	(3 T II	U/S	5	ASII	GLY	FIIE	No!		
		ווב 1	Δcr.	-	aln	Ser	G l v	_	•	Len	Δsn	Πla	Asn	Glu	CVS	Δrσ	Thr		
	269		MSF	nrg	.51.11	J I	15	\) L ! !	12 / 13	110.11	тор	20	1100	314	-1.5	111.9	25		
			Pro	Glu	Ala	Cys		Glv	Asp	Met	Met		Val	Asn	Gln	Asn			
	$\frac{1}{2}$			514		31)	5		E		35	- , -				40			
		Glv	Tyr	Leu	Çvs	Lle	Pro	Arg	Thr	Asn	Pro	Val	Tyr	Arq	Gly	Pro	Tyr		
	277	•	1		45			,		50			-	.*	55		•		
	280	ser	Asn	Pro	Tyr	ser	Thr	Ser	Tyr	Ser	Gly	Pro	Tyr	Pro	Ala	Ala	Ala		
	281			60					6.5					7.0					
	284	Pro	Pro	Val	Pro	Ala	Ser	Asn	Tyr	Pro	Thr	Ile	ser	Arq	Pro	Leu	Val.		
	285		75					80					8.5						
	288	$C \cap S$	Arg	Phe	Gly	Tyr	Gln	${\tt Met}$	Asp	Glu	Gly	Asn	Gln	Cys	Val	Asp	Val		
	289	90					95					100					105		
		Asp	Glu	Cys	Ala	Thr	Asp	ser	His	Gln	Cys	Asn	Pro	Thr	Gln	Ile	Суѕ		
	293					110					115					120			
		I l.e	Asn	Thr		Gly	Gly	туг	Thr		Ser	Cys	Thr	Asp		Tyr	Trp		
	297	_			125		_	_	_	130			_	_	135		~		
		Leu			Gly	Gln	Cys	Leu		$I \perp \epsilon$	Asp	Glu	Cys		Гуг	GIY	гуг		
	301	a.		140	Ţ	.~	• 1		145	T>		G .	т.	150		Th	Cuc		
				GIN	Leu	Cys	Ala					ser		ser	CYS	Tur	Cys		
	305		155	@1	Db.	The	T av	160		Nar.		7 *~~	165	Circ	Clr	Nan	V > 1		
	3 U B	ASII	Pro	$OI\lambda$	ьие	Thr	reu	ASII	asp	ASL	617	Ard	ser	CYS	OII	ASP	val		

RAW SEQUENCE LISTING DATE: 06/22/2001 PATENT APPLICATION: US/09/674,330A TIME: 12:11:11

Input Set : A:\ES.txt

Output Set: N:\CRF3\06222001\1674330A.raw

																=
	170	_ ,		_ ,	- 1	175	_	_			180	1	_			185
	Asn	Glu	Cys	Glu		Glu	Asn	Org	Cys		GIn	Thr	Cys	Val		Thr
313					190					195					200	
	Tyr	Gly	Ser		He	Cys	Arg	Cys	_	Pro	Gly	Tyr	Glu		Glu	Glu
317				205					210					215		
3.20	Asp	Gly		His	Cys	Ser	Asp		Asp	Glu	Cys	Ser	Phe	Ser	Glu	Phe
321			22:)					225					230			
324	Leu	Cys	G1n	His	Glu	Cys	Val	Asn	Gln	Pro	Gly	ser	Tyr	Phe	Cys	ser
3 4 5		235					240					245				
328	Cys	Pro	Pro	Gly	Tyr	Val	Leu	Leu	Asp	Asp	Asn	Arg	Ser	Cys	Gln	Asp
3.29	250					255					260					265
332	He	Asn	Glu	Cys	$\operatorname{\mathfrak{Ilu}}$	His	Arg	Asn	His	Thr	Cys	Thr	Ser	Leu	Gln	Thr
3 3 4					270					275					280	
336	Cys	Tyr	Asn	Leu	Gln	Gly	Gly	Phe	Lys	Cys	He	Asp	Pro	Ile	Ser	Cys
337				285					290					295		
340	Glu	Glu	Pro	Tyr	Leu	Leu	He	Gly	Glu	Asn	Arg	Cys	Met.	Cys	Pro	Ala
341			3()()	•				305				-	310	-		
344	Glu	His	Thr	Ser	Cys	Arg	Asp	Gln	Pro	Phe	Thr	Ile	Leu	Tyr	Arq	Asp
345		315			•		320					325		-		_
348	Met	Asp	Val	Val	Ser	Gly	Arg	Ser	Val	Pro	Ala	Asp	He	Phe	Gln	Met
	330	·				335	,				340	-				345
352	Gln	Ala	Thr	Thr	Arq	Tyr	Pro	Gly	Ala	Tvr	Tyr	Ile	Phe	Gln	Пe	Lys
353					350	•				355					360	,
	Ser	Glv	Asn	Glu		Ara	Glu	Phe	Туr		Ara	Gln	Thr	Gly	Pro	Ile
357		1		365					370)			375		
	Ser	Ala	Thr		Val	Met	Thr	Ara	Pro	He	Lvs	Glv	Pro	-	Asp	Tle
361			380					385			•		390)	1	
	Gln	Leu		T. e 11	Glu	Met	Tle		Val	Asn	Thr	Va l		Asn	Phe	Ara
365		395					400					405				,
	Gly		Ser	Va l	He	Ara	Leu	Ara	Ile	Tvr	Val	Ser	Gln	Tvr	Pro	Phe
	410		201		•••	415		*****		+1-	420			- 1 -		425
	-:21() · SE	:O II	O.N.O.	: 4	• • -										
	.:21															
	<212				-											
	.:213				Mus	musc	211 111									
	.400							-								
			-			Phe	Asp	Len	Asp	Ara	Gln	Ser	Glv	Gln	(Turs	Leu
380		., j c	1 111	11511	5	1110	пор	100		10	01.11	00.1	011	7711	15	1.10.00
		He	Asti	Glu		Ara	Thr	Tle	Pro		Ala	17.3	Ara	C1v		Mert
383	DE	1. 1 (.	11.51	20	713	111 9	1111	110	25	Olu	mu	~;D	111 9	30	op	1100
	Mot	Cuc	Val		(21 n	Aen	G1v-	Glv	Tyr	Lan	Circ	ΠD	Pro		Thr	Δsn
386	PAC. C.	, , y S	35	ASII	,1111	7,511	OLY	40	1 1 1	1 (. (1	C 3 3	L1C.	45	ni à	1111	11211
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389	110	50	1 Y T	длу	1.3 L Y	11.0	55	OCI	C-1.511	110	1) 1	501 60	1111	201	. , .	ECT.
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392	_	LIO	1 Å T	LIO	nia	70	лта	LLU	FIU	vai	75	ата	OCI	0311	1 1 1	80 80
		110	Sor	Ara	Dro	_	Val	(7e	Arg	Dha		Trrr	Gln.	Mot	Aen	
395	TILL	116	261	ALY	85	Leu	v ci I	- 1 D	arg	90	GIA	TIT	OTH	ACC.	45 95	0111
	G1···	Aen	Gln	Circ		Aen	Val	Aen	Glu		Δla	Thr	Δen	Ser		Gln
J	3 1 1	. 1.0)11	OTI	CYS	val	nop.	• u i	110 F	Q E IA	~ <i>, 3</i>		4114			1110	U 1 1 1

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY

DATE: 06/22/2001 PATENT APPLICATION: US/09/674,330A TIME: 12:11:12

Input Set : A:\ES.txt

Output Set: N:\CRF3\06222001\I674330A.raw

L:244 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 L:744 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7

L:1029 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:11

L:1029 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11